



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D350-636-016
Job Sheet 190201



Part No: D350-636-016

Job Qty: 1 pcs

Part Name: AS350/355 - Skidtube - Float w/ Heavy-Duty Wearplates - RH



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 2/5/19

Job Tracking No:

Due Date: 3/8/19

Created By: Jesse White

Type: Stock

Description: SIOP

Note: DWG D4168-042 REV.C IPP rev:A 10.09.28 new issue DD verf:EC IPP Rev:B 11.04.14 ecn11-553 DD verf:EC IPP Rev:C 11.10.18 as per NCR 11-906 DD verf:EC IPP REV:D 13.08.28 PER ECN13-594 DD VERF:JLM IPP REV:E 18.11.12 AS PER DWG REV.C DD VERF:JFS

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
110	Skidtubes - 1	1 pcs	3/8/19	0.00	4.78		Skidtubes - 1		
							Skidtubes - 2		
							Skidtubes - 3		
							Skidtubes - 4		TF
							Skidtubes - 5		BE
120	QC 10	1 pcs	3/8/19	0.00	0.00		QC 10 - 10		
							QC 10 - 18		
							QC 10 - 24		
							QC 10 - 38		
							QC 10 - 43		
							QC 10 - 50		
							QC 10 - 58		
							QC 10 - 9		PD 19.02.26
130	QC 5	1 pcs	3/8/19	0.00	0.00		QC 5 - 10		
							QC 5 - 12		
							QC 5 - 17		
							QC 5 - 18		
							QC 5 - 19		
							QC 5 - 22		
							QC 5 - 24		
							QC 5 - 3		
							QC 5 - 38		
							QC 5 - 42		
							QC 5 - 43		
							QC 5 - 49		
							QC 5 - 51		
							QC 5 - 58		
							QC 5 - 68		
							QC 5 - 9		PD 19.02.26
							QC 5 - 50		

Plex 2/5/19 4:12 PM dart.white.jesse

5153455 RH

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

Route update only ☐

NCR No. _____

Job: _____

Part No. _____

DISPOSITION

Rework ☐

Scrap ☐

Skid-tube ☐

Machining ☐

Cross tube ☐

Small Fab ☐

Eng. (Non-AW) ☐

Prod. Eng. Coord. ☐

Engineering ☐

Water Jet ☐

Supplier ☐

Quality ☐

MFG (L2002) ☐

Date : _____

Sequence #: _____

Description Work Order Deviation

Dart Aerospace Ltd.
1270 Aberdeen Street
Hewlettsbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaero.com



Container No: S153455



Part: D350 - 636 - 016

Job No: 190201

Serial No/Batch: S153455

Revision: C

Inspector: _____

Exp Date: _____

Instructions: TC STC SH99 - 7 Issue 2, EAA, SZQ, SR00646SI

Root Cause

Operator ☐

Manufacturing Process ☐

Equip/Tooling ☐

Handling/Preservation ☐

Material ☐

Product Improvement ☐

Process Improvement ☐

Human Factors ☐

☐ Pressure/Forced

☐ Bending

☐ Crushing

☐ Cracks

☐ Crimp/Kink/Ripple/Wave/Twist

☐ Marks/Chatter

☐ Mislabeled

☐ BOM/Route

☐ Broken/Damage/Defect

☐ Incomplete/Unclear Instructions

☐ Drill Holes

☐ Fit/Function

☐ Grain Direction

☐ Weld

☐ Wrong Stock Pulled

☐ Out of Sequence

☐ Off-set/Set-up

☐ Drawing

☐ Finish

☐ Part Lost/Missing

☐ Misread

Other/Details: _____

				QC 5 - 30	
140	Handfinish - 1-1 Chemical-B4B	1 pcs	3/8/19	0.00 0.98	Handfinish - 1 - 1 - B4B
					Handfinish - 1 - 2 - B4B
					Handfinish - 1 - 3 - B4B
					Handfinish - 1 - 4 - B4B
					Handfinish - 1 - 5 - B4B
					Handfinish - 1 - 6 - B4B
					Handfinish - 1 - 7 - B4B
					Handfinish - 1 - 8 - B4B
					Handfinish - 1 - 9 - B4B
					Handfinish - 1 - 10 - B4B
					Handfinish - 1 - 11 - B4B
					Handfinish - 1 - 12 - B4B
					Handfinish - 1 - 13 - B4B
					Handfinish - 1 - 14 - B4B
					Handfinish - 1 - 15 - B4B
					Handfinish - 1 - 16 - B4B
					Handfinish - 1 - 17 - B4B
					Handfinish - 1 - 18 - B4B
					Handfinish - 1 - 19 - B4B
					Handfinish - 1 - 20 - B4B
					Handfinish - 1 - 21 - B4B
					Handfinish - 1 - 22 - B4B
150	QC 7	1 pcs	3/8/19	0.00 0.00	QC 7 - 10
					QC 7 - 13
					QC 7 - 14
					QC 7 - 15
					QC 7 - 17
					QC 7 - 18
					QC 7 - 19
					QC 7 - 2
					QC 7 - 28
					QC 7 - 3
					QC 7 - 30
					QC 7 - 34
					QC 7 - 36
					QC 7 - 37
					QC 7 - 38
					QC 7 - 41
					QC 7 - 47
					QC 7 - 48
					QC 7 - 51
					QC 7 - 58
					QC 7 - 59
					QC 7 - 6
					QC 7 - 60
					QC 7 - 9
					QC 7 - 68
					QC 7 - 50
					QC 7 - 67
160	Skidtubes - 2 - B4B	1 pcs	3/8/19	0.00 4.78	Skidtubes - 1 - B4B
					Skidtubes - 2 - B4B
					Skidtubes - 3 - B4B
					Skidtubes - 4 - B4B
					Skidtubes - 5 - B4B
170	QC 10	1 pcs	3/8/19	0.00 0.00	QC 10 - 10
					QC 10 - 18
					QC 10 - 24
					QC 10 - 38

D.R 19/02/26

M.C.

TF
DE

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

180	QC 5	1 pcs	3/8/19	0.00 0.00	QC 10 - 43	
					QC 10 - 50	
					QC 10 - 58	
					QC 10 - 9	
					QC 5 - 10	
					QC 5 - 12	
					QC 5 - 17	
					QC 5 - 18	
					QC 5 - 19	
					QC 5 - 22	
					QC 5 - 24	
					QC 5 - 3	
					QC 5 - 38	
					QC 5 - 42	
					QC 5 - 43	
					QC 5 - 49	
					QC 5 - 51	
					QC 5 - 58	
					QC 5 - 68	
					QC 5 - 9	
190	Handfinish - 2-1 Pressure- B4B	1 pcs	3/8/19	0.00 0.98	QC 5 - 50	
					QC 5 - 30	
200	Spray Paint - 2 - B4B	1 pcs	3/8/19	0.00 0.61	Handfinish - 2 - 1 - B4B	
					Handfinish - 2 - 2 - B4B	
					Spray Paint - 1 - B4B	
					Spray Paint - 2 - B4B	
					Spray Paint - 3 - B4B	
210	QC 14	1 pcs	3/8/19	0.00 0.00	Spray Paint - 4 - B4B	
					QC 14 - 15	
					QC 14 - 2	
					QC 14 - 34	
					QC 14 - 38	
					QC 14 - 41	
					QC 14 - 51	
					QC 14 - 58	
					QC 14 - 59	
					QC 14 - 9	
230	Handfinish - 4-1-Assembly- B4B	1 pcs	3/8/19	0.00 0.98	QC 14 - 68	
					Handfinish - 4 - 1 - B4B	
					Handfinish - 4 - 10 - B4B	
					Handfinish - 4 - 11 - B4B	
					Handfinish - 4 - 12 - B4B	
					Handfinish - 4 - 13 - B4B	
					Handfinish - 4 - 14 - B4B	
					Handfinish - 4 - 15 - B4B	
					Handfinish - 4 - 2 - B4B	
					Handfinish - 4 - 3 - B4B	
					Handfinish - 4 - 4 - B4B	
					Handfinish - 4 - 5 - B4B	
					Handfinish - 4 - 6 - B4B	
					Handfinish - 4 - 7 - B4B	
					Handfinish - 4 - 8 - B4B	
240	QC 5	1 pcs	3/8/19	0.00 0.00	Handfinish - 4 - 9 - B4B	
					QC 5 - 10	
					QC 5 - 12	
					QC 5 - 17	
					QC 5 - 18	
					QC 5 - 19	
					QC 5 - 22	

MAR 26 2019

DAS
40
9-89D.R. 19/03/26
RD 19-4-28

D.R. 19-4-6

D.R. 19-4-6

DAS
15
9-89

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

					QC 5 - 24	
					QC 5 - 3	
					QC 5 - 38	
					QC 5 - 42	
					QC 5 - 43	
					QC 5 - 49	
					QC 5 - 51	
					QC 5 - 58	
					QC 5 - 68	
					QC 5 - 9	
					QC 5 - 50	
					QC 5 - 30	
250	Packaging 1-1 - Pick Kit - B4B	1	3/8/19	0.00 0.00	Packaging 1 - 1 - B4B	
	pcs				Packaging 1 - 2 - B4B	
					Packaging 1 - 3 - B4B	
					Packaging 1 - 4 - B4B	
					Packaging 1 - 5 - B4B	
					Packaging 1 - 6 - B4B	
					Packaging 1 - 7 - B4B	
					Packaging 1 - 8 - B4B	
					Packaging 1 - 9 - B4B	
					Packaging 1 - 10 - B4B	
					Packaging 1 - 11 - B4B	
					Packaging 1 - 12 - B4B	
					Packaging 1 - 13 - B4B	
					Packaging 1 - 14 - B4B	
					Packaging 1 - 15 - B4B	
					Packaging 1 - 16 - B4B	
					Packaging 1 - 17 - B4B	
					Packaging 1 - 18 - B4B	
					Packaging 1 - 19 - B4B	
					Packaging 1 - 20 - B4B	
					Packaging 1 - 21 - B4B	
					Packaging 1 - 22 - B4B	
					Packaging 1 - 23 - B4B	
					Packaging 1 - 24 - B4B	
					Packaging 1 - 25 - B4B	
					Packaging 1 - 26 - B4B	
					Packaging 1 - 27 - B4B	
					Packaging 1 - 28 - B4B	
					Packaging 1 - 29 - B4B	
					Packaging 1 - 30 - B4B	
					Packaging 1 - 31 - B4B	
					Packaging 1 - 32 - B4B	
					Packaging 1 - 33 - B4B	
					Packaging 1 - 34 - B4B	
					Packaging 1 - 35 - B4B	
					Packaging 1 - 36 - B4B	
260	QC 4	1	3/8/19	0.00 0.00	QC 4 - 26	
	pcs				QC 4 - 28	
					QC 4 - 38	
					QC 4 - 42	
					QC 4 - 58	
					QC 4 - 6	
					QC 4 - 69	
					QC 4 - 9	
					QC 4 - 46	
270	Packaging 3-1 - Stock - B4B	1	3/8/19	0.00 0.00	Packaging 3 - 1 - B4B	
	pcs				Packaging 3 - 2 - B4B	

DAS
MAY 15 2019 6876
MAR 2 8 2019 9-89

DAS
58 MAY 22 2019
9-89

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

				Packaging 3 - 3 - B4B	
				Packaging 3 - 4 - B4B	
				Packaging 3 - 5 - B4B	
				Packaging 3 - 6 - B4B	
				Packaging 3 - 7 - B4B	DAS
				Packaging 3 - 8 - B4B	58 MAY 22 2019
				Packaging 3 - 9 - B4B	9-89
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	DAS
275 DC - 1 - B4B	1	3/8/19	0.00 0.00	DC - 1 - B4B	21
	pcs			DC - 2 - B4B	9-89 MAY 24 2019
280 QC 21 - FG	1	3/8/19	0.00 0.00	QC 21 - FG - 21	DAS
	pcs			QC 21 - FG - 70	21 MAY 24 2019
				QC 21 - SA - 53	9-89

Part Op **110** - (Skidtubes) 1- Pick D2600-3 Bent 2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT
 Descriptions: end per dwg D4168-2 3- Drill pilot holes for blade fitting bolt holes using DT8983. Start with 3/16", then open to 0.500" using center drill then ream holes using 0.500" reamer. PIN first side. Repeat process on second side. ***ENSURE PROPER POSITIONING FWD BEND MUST BE FACING UP WHEN DRILLING FIRST SIDE*** Drill pilot holes as per Dwg D4168 sheet 5 (D4168-2 details). Drill using drill Jig DT8150 & DT8863A for first side only DT8863B for second side (detail K) 4- Locate DT8329 off of blade fitting bolt holes and drill pilot holes for blade fitting, section R-R and open to 0.500" 5- Drill tow ring hole using DT9616 detail "J" 6- Drill most FWD wearplate hole using DT9678 locating of 66.54" hole 7- Open up holes of Detail J to 0.297" (total of 2 holes per side) +.201" (total of one hole per side DT9616) as per dwg D4168. 8- Weld D2744 Cap as per Dwg D4168 and QSI 004. Fill grooves in bend left from bending as per QSI 004 A/R Aluminum Rod batch: 138989 9- Grind welds flush as per Dwg D4168
120 - (QC10- Inspect visual per QSI004- ground welds)
130 - (QC5- Inspect part completeness to step on W/O)
140 - (Chemical Conversion Coat per QSI005 4.1)
150 - (QC7-Inspect Chemical Conversion Coat)
160 - (Skidtubes) 1-Open up holes using hole saw of Detail L and ground handling to 0.625" (total of 8 holes per side) as per dwg D4168. 2-Open up holes using hole saw of Detail K to 0.750" (total of 4 holes per side) as per dwg D4168. 3- Open float hole to 0.500" using uni-bit (4 per side) and Run on wearplate holes to .375" 4 per side 4-Chamfer holes of Detail K,L, ground handling and float holes per dwg D4168 (welding instructions on sheet 9) 5-Deburr and blow out all chips from inside of tube 6- Prepare tube for welding, remove alodine as required. 7-Bond web D2739 in place as per QSI 015, let cure for 12hrs. A/R Sikaflex-291 batch: M18484 exp. date: 0307/19 ***ATTN: USE I-BEAM LOCATION AID (BLADE FITTING)*** 8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D4168 & QSI004 (welding instructions on sheet 8) A/R Aluminum Rod batch: 138989 9- At section AP-AP drill out x-bolt spacer to 0.404" 10- Grind welds flush as per Dwg D4168 11-Spot face ground handling holes section (total of 4 places per side) as per dwg D4168 12- C'bore section CH-CH. ADJUST TOOLING AS REQUIRED. VERF BY: _____ 13- Deburr

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

holes, ensure tube is free of all scratches before sending to paint. ***** FOR DELUXE SKIDTUBE IF APPLICABLE
 DRILL TOW RING HOLE IN TUBE ***** REF TO W/O BATCH:

170 - (QC10- Inspect visual per QSI004- ground welds)

180 - (QC5- Inspect part completeness to step on W/O) ***VERIFY C'BOARD IS GOOD***

190 - HandFinish2 (Pressure Wash per QSI005 4.3/ Clean and remove all markings) Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

200 - (Spray Paint / NDT Room) 1- PRIME AS PER DWG AND QSI 005 4.2 PRIMER PRC DESOTO 515X349

BATCH: 5163577 2- PAINT WHITE AS PER DWG AND QSI 005 4.2 PAINT BATCH: 5164819

210 - (QC14- Inspect Spray Paint) Inspect for foreign object per QSI 024

230 - (Assemble as per dwg) 1- Install inserts as per Dwg D4168 2- Inspect for Foreign Objects 3- Install blade fitting D3488-4, wearshoes and ground handling hardware as per dwg D4168 SIKAFLEX 241 BATCH: 5124342 EXP

DATE: 19-12-8 4-assemble o'ring to plug as per dwg D3492 and apply o'ring lube A/R 55-o'ring lube

batch: 51135843 5-Coat all exposed fasteners with "LPS Procyon" batch: 51133690

240 - (QC5- Inspect part completeness to step on W/O)

250 - (Pick Kit) If making a D350-636-216 pick kit will only requires: 1 X AN3C37A 1 X AN3C34A 1 X AN3C42A 2 X D3493-1

260 - (QC4- 100% Inspect kits for completeness) *****ensure antiseize is on AN8C21A bolts*****

270 - Identify and pack for shipping as per PPPD350-636-016 Location : FG071

275 - (Document Control) record fwd angle: _____ Photocopy blue file and type labels per PPP D350-636-016 CHG 006

280 - (QC21- Final Inspection - Work Order Release)

Job BOM

009614

Part / Item	Component Name	Quantity	Operation	Container
D2600-3-BENT-RH	Extrusion Bent RH	1 pcs (1 ea)	110-Skidtubes - 1	5124559
D2744	Cap	1 pcs (1 ea)	110-Skidtubes - 1	5150291
D2739	350 I-Beam	1 pcs (1 ea)	160-Skidtubes - 2 - B4B	5152441
D2743	Crossbolt Spacer	8 pcs (8 ea)	160-Skidtubes - 2 - B4B	5156521x8
D3490-1	Cross Bolt Spacer	4 pcs (4 ea)	160-Skidtubes - 2 - B4B	5160920x2
D3490-3	Cross Bolt Spacer	4 pcs (4 ea)	160-Skidtubes - 2 - B4B	5107862
ALS4-1032-225	Rivnut	4 Ea (4 ea)	230-Handfinish - 4-1-Assembly-B4B	5059809
AN3C34A	Bolt	1 Ea (1 ea)	230-Handfinish - 4-1-Assembly-B4B	5152649
AN3C36A	Bolt	4 Ea (4 ea)	230-Handfinish - 4-1-Assembly-B4B	511370741
AN3C6A	Bolt	4 Ea (4 ea)	230-Handfinish - 4-1-Assembly-B4B	5142462
AN6C44A	Bolt	4 Ea (4 ea)	230-Handfinish - 4-1-Assembly-B4B	5149102
AN8C35A	Bolt	1 Ea (1 ea)	230-Handfinish - 4-1-Assembly-B4B	5079137-1
D2745	Bushing	8 Ea (8 ea)	230-Handfinish - 4-1-Assembly-B4B	5163736
D3488-4	Blade Fitting, RH	1 pcs (1 ea)	230-Handfinish - 4-1-Assembly-B4B	5147789
D3492-1	Plug	8 pcs (8 ea)	230-Handfinish - 4-1-Assembly-B4B	5168857(x5)
D3492-3	Plug	8 pcs (8 ea)	230-Handfinish - 4-1-Assembly-B4B	5137517
D3631-1	Washer	8 pcs (8 ea)	230-Handfinish - 4-1-Assembly-B4B	5058407
D3873-1	Bushing	7 pcs (7 ea)	230-Handfinish - 4-1-Assembly-B4B	5172675
D4154-041	Wearplate Assembly	1 Ea (1 ea)	230-Handfinish - 4-1-Assembly-B4B	5173918
D4170-1	Bushing	4 pcs (4 ea)	230-Handfinish - 4-1-Assembly-B4B	5137508
D4171-1	Bushing	1 pcs (1 ea)	230-Handfinish - 4-1-Assembly-B4B	5142731
MS21043-3	Nut	5 Ea (5 ea)	230-Handfinish - 4-1-Assembly-B4B	5099569
MS21043-6	Nut	4 Ea (4 ea)	230-Handfinish - 4-1-Assembly-B4B	5149193
MS21083C8	Nut	1 Ea (1 ea)	230-Handfinish - 4-1-Assembly-B4B	5149193
NAS1149C0332R	Washer	4 Ea (4 ea)	230-Handfinish - 4-1-Assembly-B4B	5164046
NAS1149C0363R	Washer	9 Ea (9 ea)	230-Handfinish - 4-1-Assembly-B4B	5148669
NAS1149C0832R	Washer	1 Ea (1 ea)	230-Handfinish - 4-1-Assembly-B4B	5135100
NAS1515H3L	Washer	4 Ea (4 ea)	230-Handfinish - 4-1-Assembly-B4B	5076017
NAS1611-010	O-Ring	8 Ea (8 ea)	230-Handfinish - 4-1-Assembly-B4B	5083559
NAS1611-013	O-Ring	8 Ea (8 ea)	230-Handfinish - 4-1-Assembly-B4B	5106792
AN3C37A	Bolt	1 Ea (1 ea)	250-Packaging 1-1 - Pick Kit - B4B	5106746
AN3C42A	Bolt	1 Ea (1 ea)	250-Packaging 1-1 - Pick Kit - B4B	5108570
AN8C21A	Bolt	2 Ea (2 ea)	250-Packaging 1-1 - Pick Kit - B4B	5149198
D2741	Replacement Blade	1 pcs (1 ea)	250-Packaging 1-1 - Pick Kit - B4B	5159549
D3493-1	Washer	2 pcs (2 ea)	250-Packaging 1-1 - Pick Kit - B4B	5171348
MS21083C8	Nut	2 Ea (2 ea)	250-Packaging 1-1 - Pick Kit - B4B	5187203
NAS1149D0863J	Washer	2 Ea (2 ea)	250-Packaging 1-1 - Pick Kit - B4B	5186718

5133725x1
5132798x3

5162124

007918

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread		FAULT CATEGORY Other/Details: _____			

Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
110-Skidtubes - 1	D2600-3-BENT-RH	1	5	0
	D2744	1	40	0
160-Skidtubes - 2 - B4B	D2739	1	3	0
	D2743	8	8	0
	D3490-1	4	23	0
	D3490-3	4	33	0
	ALS4-1032-225	4	709	0
230-Handfinish - 4-1-Assembly-B4B	AN3C34A	1	10	0
	AN3C36A	4	384	0
	AN3C6A	4	172	0
	AN6C44A	4	101	0
	AN8C35A	1	30	0
	D2745	8	106	0
	D3488-4	1	9	0
	D3492-1	8	109	0
	D3492-3	8	96	0
	D3631-1	8	301	0
	D3873-1	7	12	0
	D4154-041	1	6	0
	D4170-1	4	42	0
	D4171-1	1	14	0
	MS21043-3	5	1,390	0
	MS21043-6	4	171	0
	MS21083C8	1	47	0
	NAS1149C0332R	4	5,027	0
	NAS1149C0363R	9	651	0
	NAS1149C0832R	1	351	0
	NAS1515H3L	4	402	0
	NAS1611-010	8	459	0
	NAS1611-013	8	132	0
250-Packaging 1-1 - Pick Kit - B4B	AN3C37A	1	35	0
	AN3C42A	1	32	0
	AN8C21A	2	55	0
	D2741	1	49	0
	D3493-1	2	27	0
	MS21083C8	2	47	0
	NAS1149D0863J	2	125	0
Part Specifications				
Specifications could not be found.				

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Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coor. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

QTY -041	QTY -042	QTY -043	QTY -044	QTY -051	QTY -052	P/N	DESCRIPTION
X						D4168-041	350 SKIDTUBE ASSEMBLY, LH
	X					D4168-042	350 SKIDTUBE ASSEMBLY, RH
		X				D4168-043	350 SKIDTUBE ASSEMBLY, LH
			X			D4168-044	350 SKIDTUBE ASSEMBLY, RH
				X		D4168-051	350 SKIDTUBE ASSEMBLY, LH
					X	D4168-052	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	1	1	D2739	WEB
8	8	8	8	8	8	D2743	CROSS BOLT SPACER
1	1	1	1	1	1	D2744	CAP
8	8	8	8	8	8	D2745	BUSHING
1		1		1		D3488-3	BLADE FITTING, LH
	1		1		1	D3488-4	BLADE FITTING, RH
4	4	4	4			D3490-1	CROSS BOLT SPACER
4	4					D3490-3	CROSS BOLT SPACER
		4	4			D3490-5	CROSS BOLT SPACER
8	8	8	8			D3492-041	PLUG ASSEMBLY
8	8					D3492-043	PLUG ASSEMBLY
		8	8			D3492-045	PLUG ASSEMBLY
8	8	8	8	8	8	D3631-1	WASHER
7	7	7	7	7	7	D3873-1	BUSHING
1	1	1	1	1	1	D4154-041	WEARPLATE ASSEMBLY
1						D4168-1	SKIDTUBE WELDMENT, LH
	1					D4168-2	SKIDTUBE WELDMENT, RH
		1				D4168-3	SKIDTUBE WELDMENT, LH
			1			D4168-4	SKIDTUBE WELDMENT, RH
				1		D4168-5	SKIDTUBE WELDMENT, LH
					1	D4168-6	SKIDTUBE WELDMENT, RH
4	4	4	4	4	4	D4170-1	SPACER
1	1	1	1	1	1	D4171-1	BUSHING
4	4	4	4	4	4	ALS4-1032-225	INSERT
1	1	1	1	1	1	AN3C34A	BOLT
4	4	4	4	4	4	AN3C36A	BOLT
4	4	4	4	4	4	AN3C6A	BOLT
4	4	4	4	4	4	AN6C44A	BOLT
1	1	1	1	1	1	AN8C35A	BOLT
5	5	5	5	5	5	MS21043-3	NUT
4	4	4	4	4	4	MS21043-6	NUT
1	1	1	1	1	1	MS21083C8	NUT
4	4	4	4	4	4	NAS1149C0332R	WASHER
9	9	9	9	9	9	NAS1149C0363R	WASHER
1	1	1	1	1	1	NAS1149C0832R	WASHER
4	4	4	4	4	4	NAS1515H3L	WASHER

NOTES:

- 1) MATERIAL: MAKE D4168-1/-2/-3/-4/-5/-6 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB. STANDARD: PRIME (REF. 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.3 OPTIONAL: POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: D4168-041/-042/-043/-044 = 32.3 lbs
D4168-051/-052 = 31.9 lbs
- 8) WELD PER DART QSI 004
- 9) FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- 10) COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF FINISH WITH MEK DEGREASER.
- 11) SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- 12) SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

C	ADDED -051/-052 (ZN D5-1 SHEETS 4, 15-16); ADDED D4168-041/-042 (ZN B5-1, SHEETS 9, 10); D3488-3/-4 REPLACES D3488-041/-042 (ZN C5-1, D2-11, D2-12, D2-13, D2-14); ADDED NOTES 13, 14 (ZN C4-1); NAS1149C0363R WAS AN960C10 (ZN A5-1, C6-11, C7-11, D8-11, C6-12, C7-12, D8-12, C8-13, C7-13, D8-13, C8-14, C7-14, D8-14); NAS1149C0332R WAS AN960C10L (ZN B1-11, B1-12, B1-13, B1-14); NAS1149C0832R WAS AN960C816L (ZN C1-11, C1-12, C1-13, C1-14)	ZF	18.03.01
B	ADD VIEW TO CONTROL FWD BEND ORIENTATION (ZN D-1/-4/-5/-6/-7); UPDATED FINISH OPTIONS. REASON: PAR13-276 AND NCR13-2757	MB	13.07.11
A	NEW ISSUE	SC	10.08.09
REV.	DESCRIPTION	BY	DATE
DESIGN	SC		
DRAWN	ZF		
CHECKED	MW		
MFG. APPR.	DD		
APPROVED	NO		
DE APPR.	DS		
DATE	18.03.01		

DART AEROSPACE USA, INC.
EUGENE, OR

DRAWING NO. REV. C
D4168
SHEET 1 OF 18
TITLE
350 SKIDTUBE ASSEMBLY
SCALE
NTS

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2019 OCT 19
20 19-030

APPROVED

Entered: _____ Date: _____

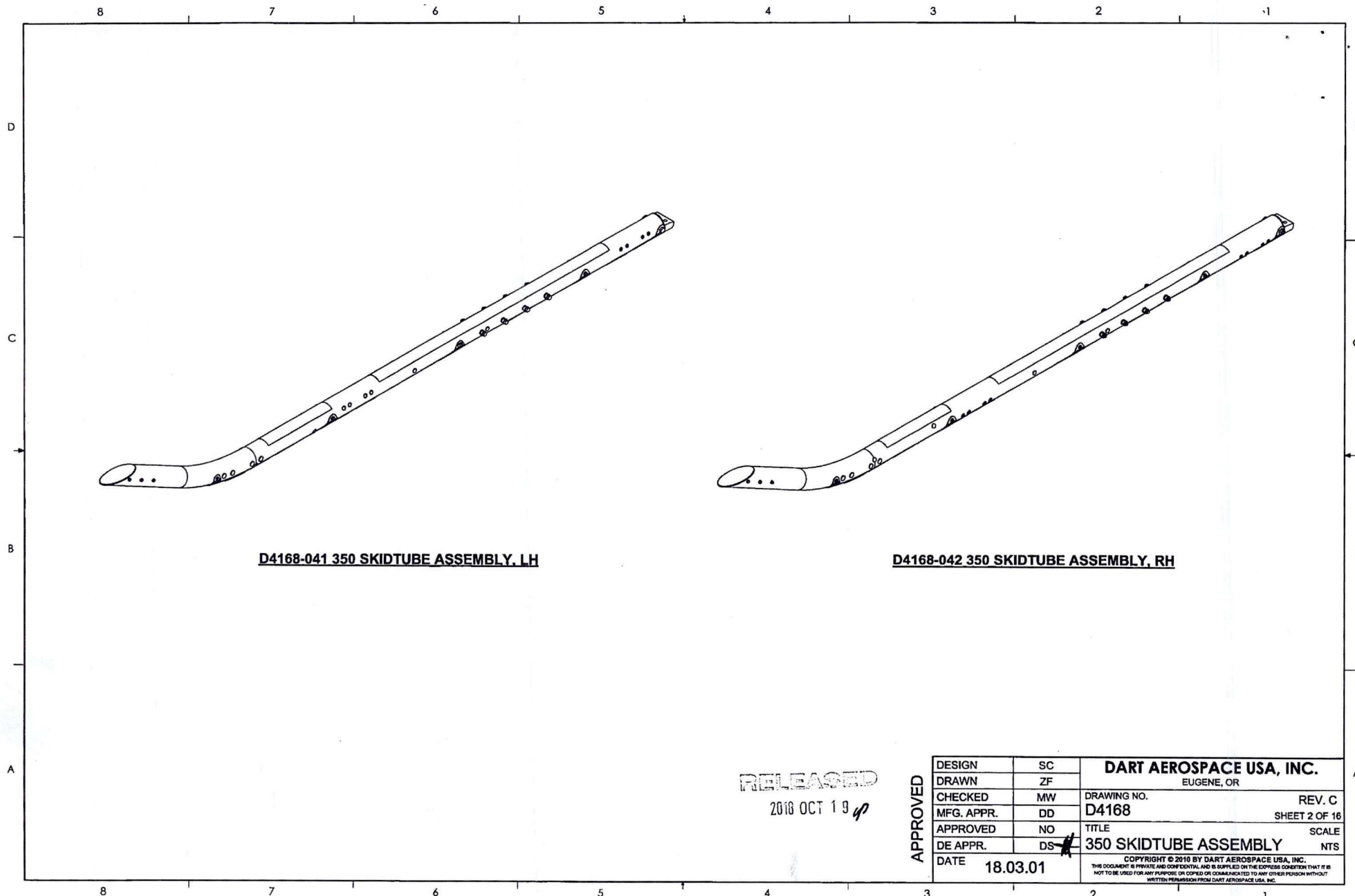


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



Entered: _____ Date: _____

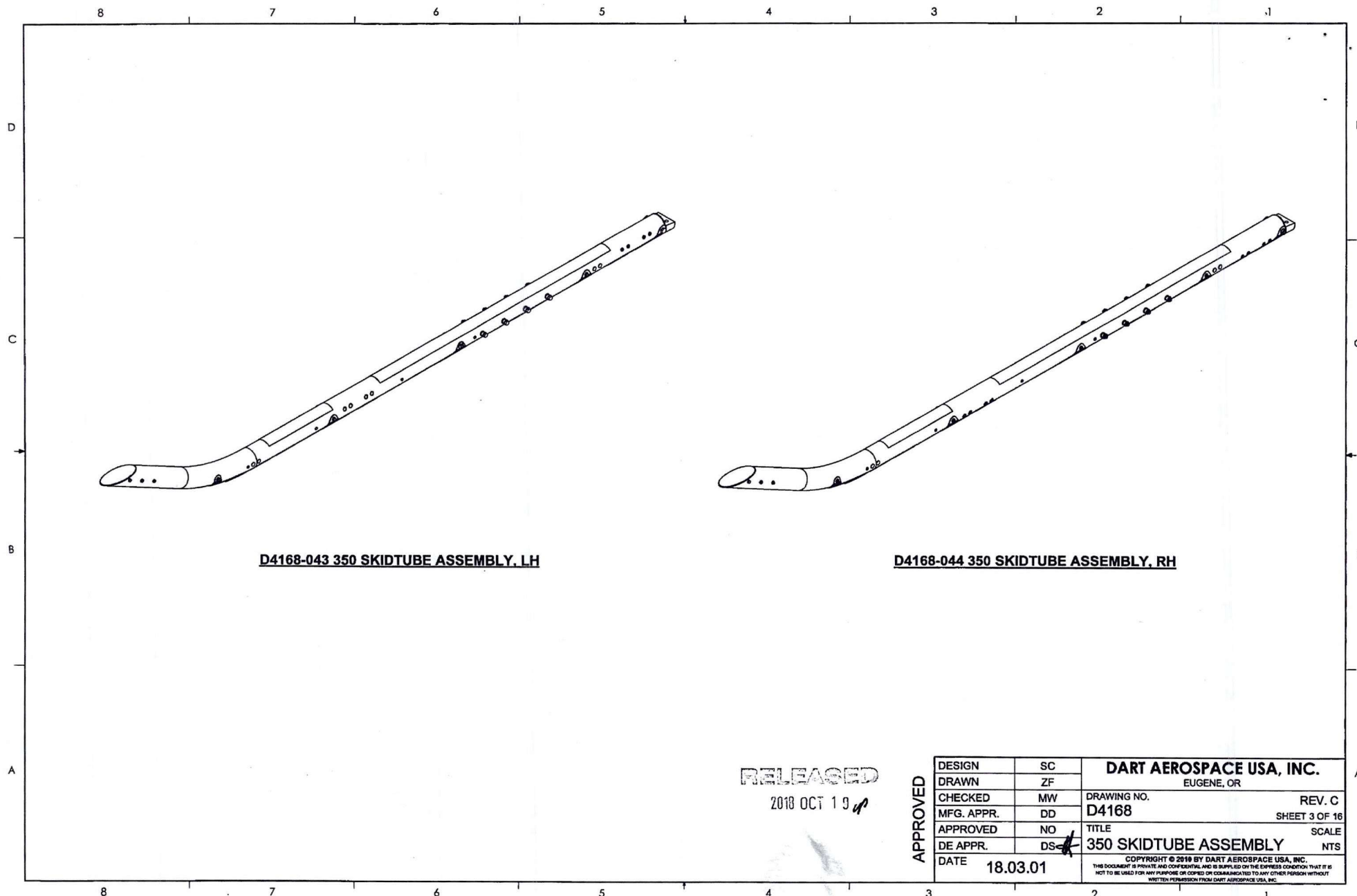


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



Entered: _____ Date: _____

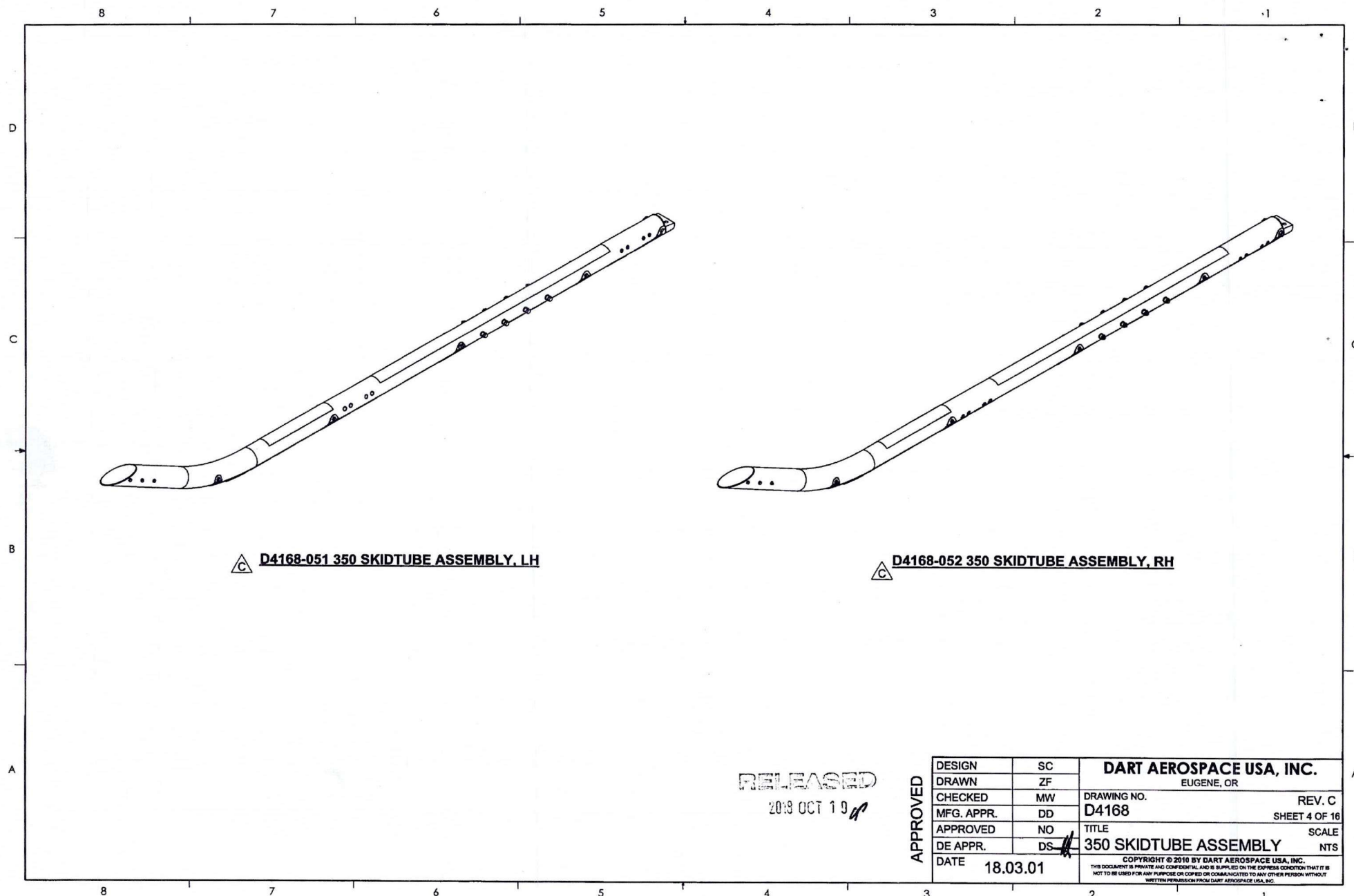


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



RELEASED
20:9 OCT 19

APPROVED

DESIGN	SC	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	ZF		
CHECKED	MW	DRAWING NO.	REV. C
MFG. APPR.	DD	D4168	SHEET 4 OF 16
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	350 SKIDTUBE ASSEMBLY	NTS
DATE	18.03.01	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

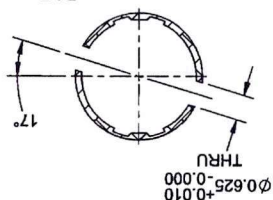
Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

DESIGN	SC	DATE	18.03.01
DRAWN	ZF	DE APPR.	DS
CHECKED	MW	APPROVED	NO
MFG. APPR.	DD	TITLE	350 SKIDTUBE ASSEMBLY
DRAWING NO.	D4168	SCALE	NTS
REV. C		SHEET 5 OF 16	
DART AEROSPACE USA, INC.			
EUGENE, OR			

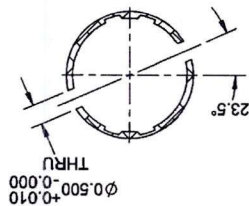
APPROVED

RELEASED
2019 OCT 19

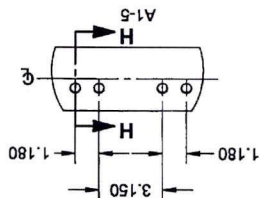
SECTION G-G
SCALE 4X, 4 PL



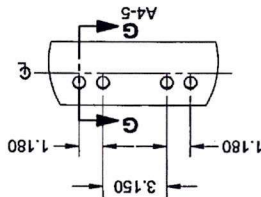
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SCALE 4X, 2 PL



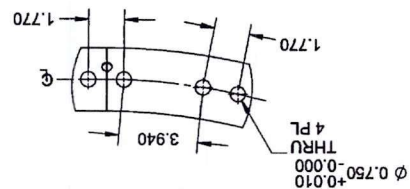
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SCALE 2X



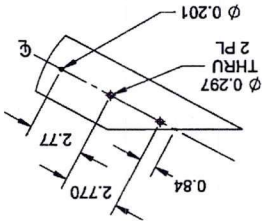
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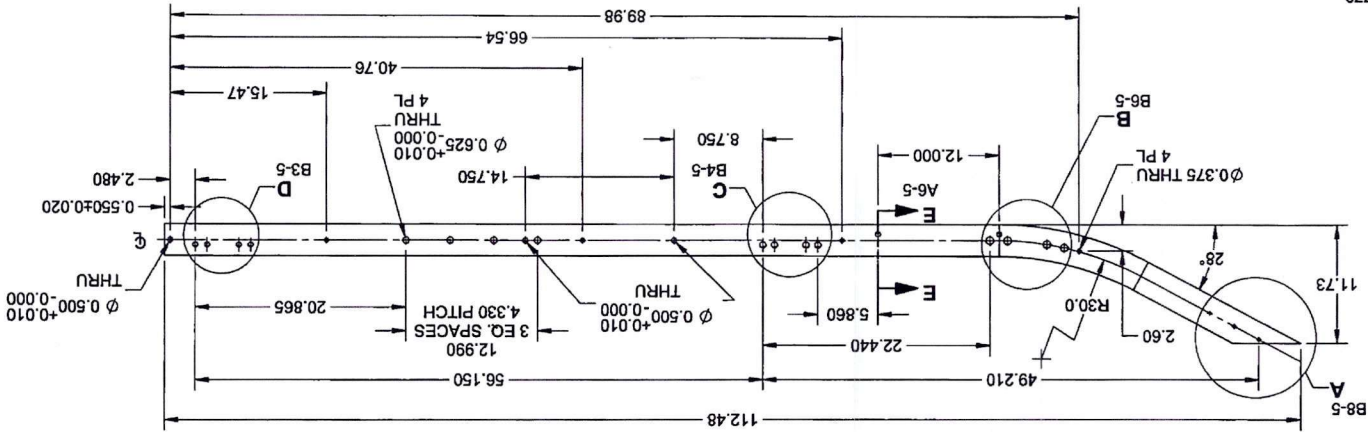
DETAIL B
SCALE 2X



DETAIL A
SCALE 2X



D4168-1 LH SKIDTUBE



Entered: _____ Date: _____

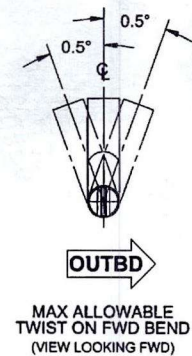
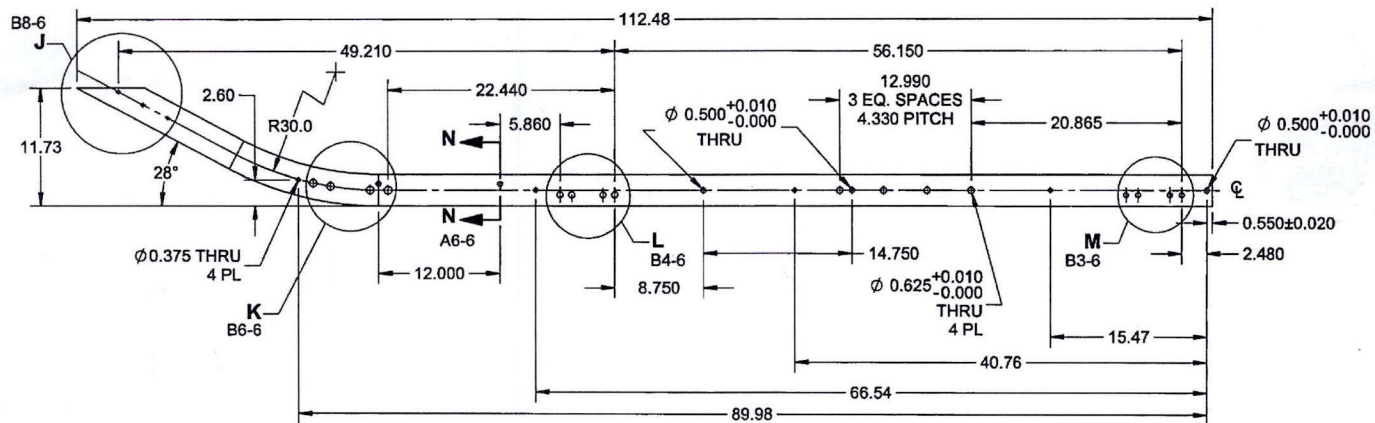


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

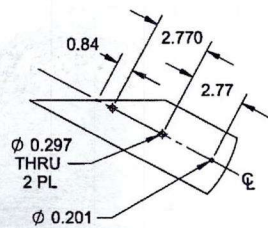
NCR No. _____

Route update only ☐

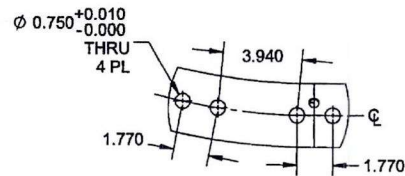
Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



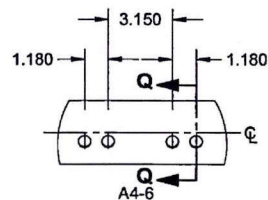
D4168-2 RH SKIDTUBE



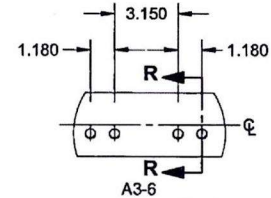
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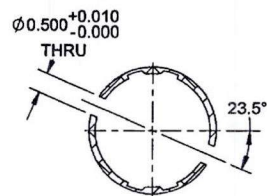
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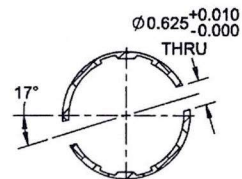
DETAIL L
SCALE 2X



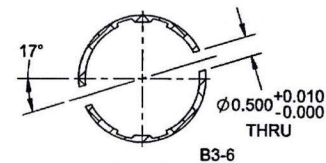
DETAIL M
SCALE 2X



SECTION N-N
SCALE 4X, 2 PL



SECTION Q-Q
SCALE 4X, 4 PL



SECTION R-R
SCALE 4X, 4 PL

RELEASED
2010 OCT 19

APPROVED

DESIGN	SC
DRAWN	ZF
CHECKED	MW
MFG. APPR.	DD
APPROVED	NO
DE APPR.	DS
DATE	18.03.01

DART AEROSPACE USA, INC.
EUGENE, OR

DRAWING NO. **D4168** REV. C
SHEET 6 OF 16
TITLE **350 SKIDTUBE ASSEMBLY** SCALE NTS

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Entered: _____ Date: _____

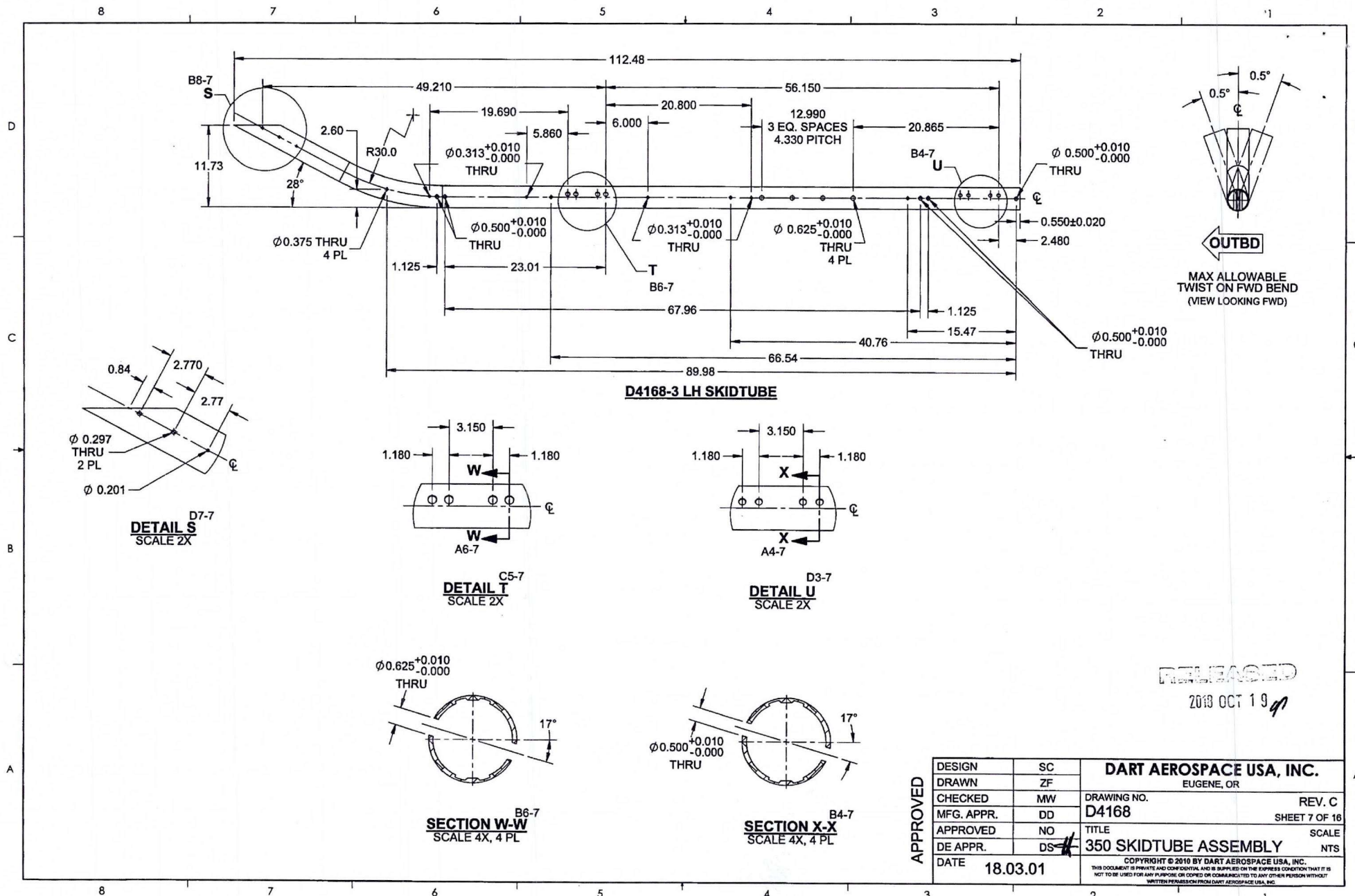


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



Entered: _____ Date: _____

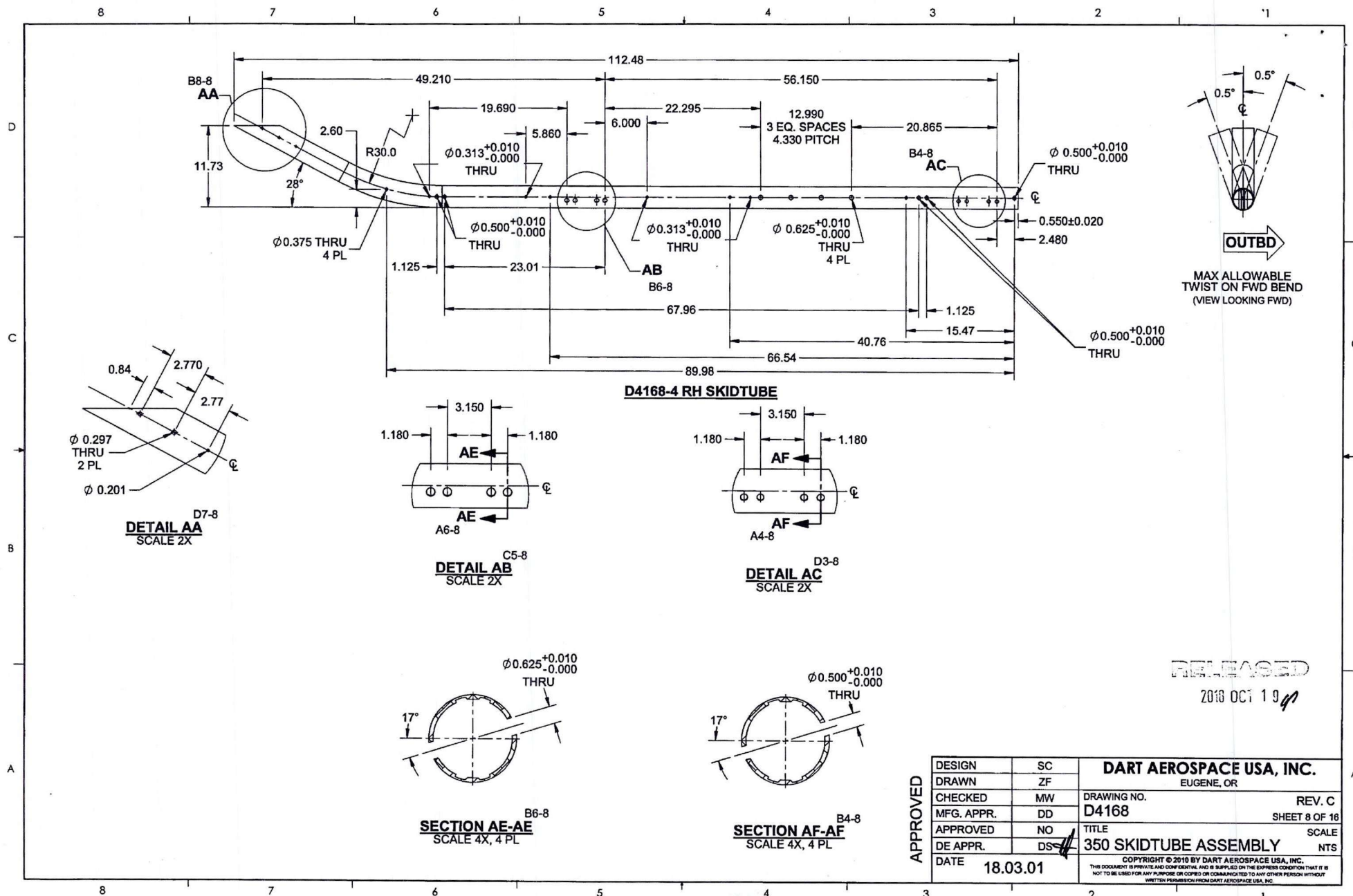


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



Entered: _____ Date: _____

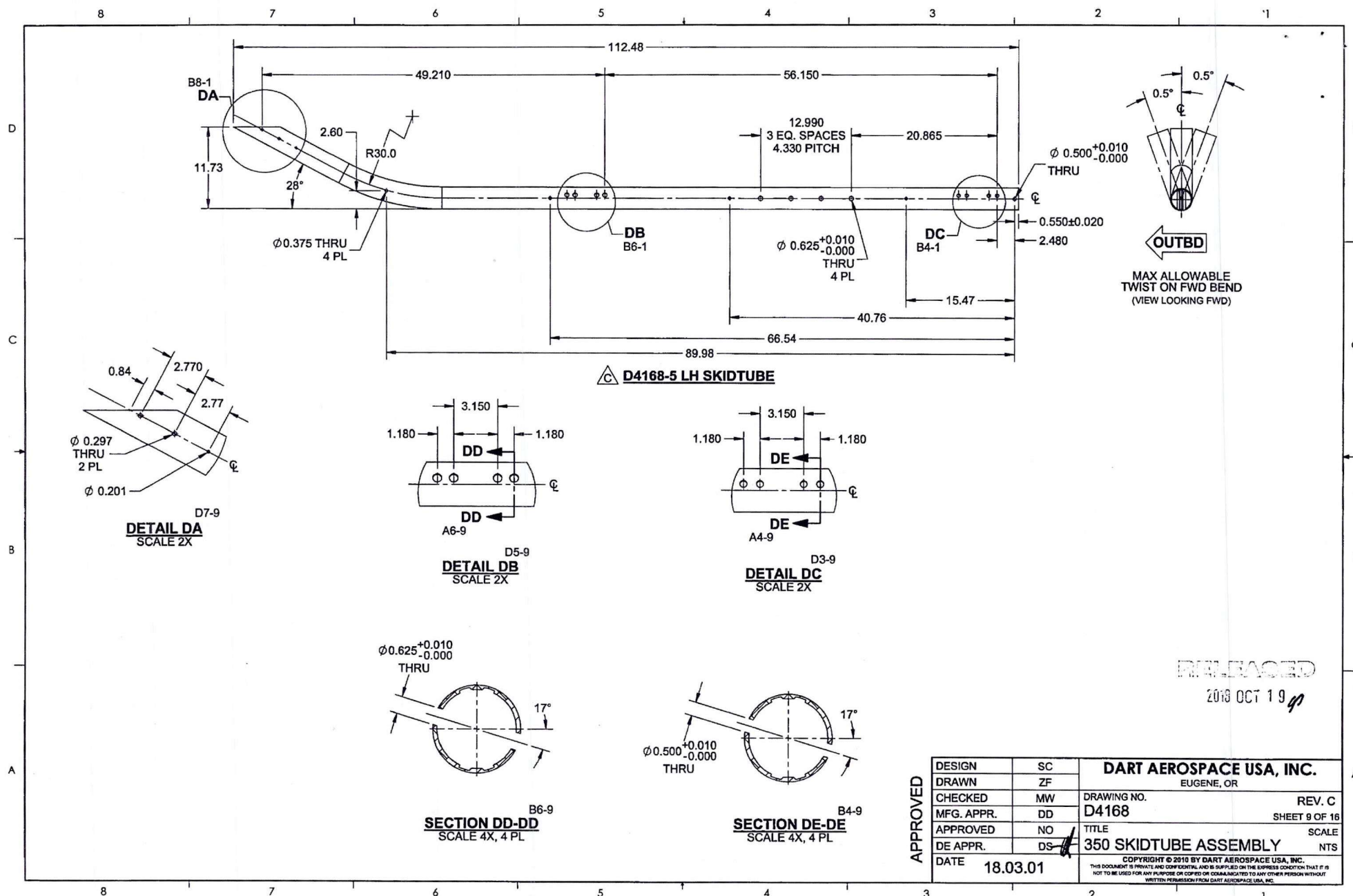


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



APPROVED

DESIGN	SC	DART AEROSPACE USA, INC.	
DRAWN	ZF	EUGENE, OR	
CHECKED	MW	DRAWING NO.	REV. C
MFG. APPR.	DD	D4168	SHEET 9 OF 16
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	350 SKIDTUBE ASSEMBLY	NTS
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Entered: _____ Date: _____

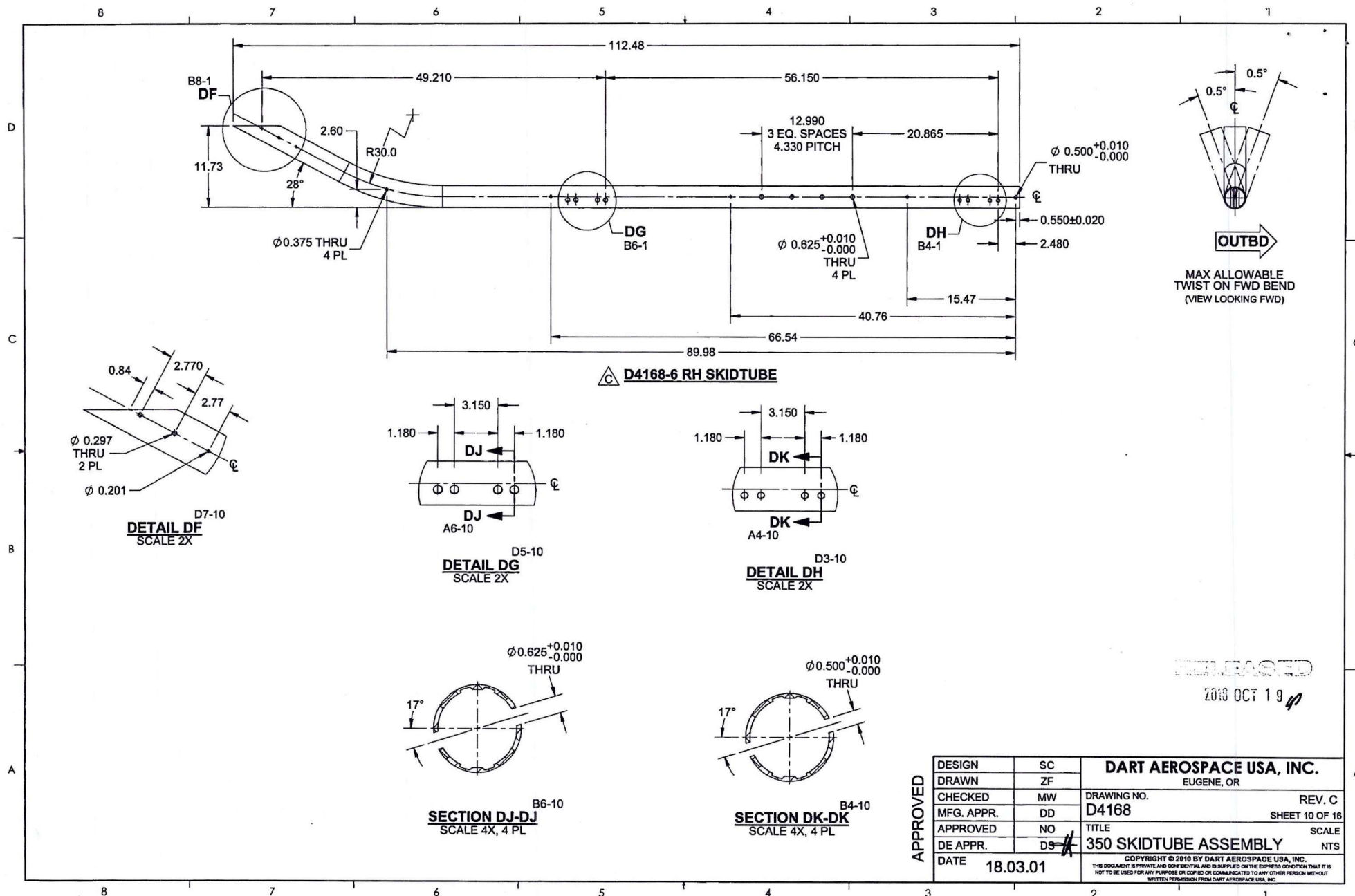


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



DESIGN	SC	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	ZF		
CHECKED	MW	DRAWING NO.	REV. C
MFG. APPR.	DD	D4168	SHEET 10 OF 18
APPROVED	NO	TITLE	SCALE
DE APPR.	D9	350 SKIDTUBE ASSEMBLY	NTS
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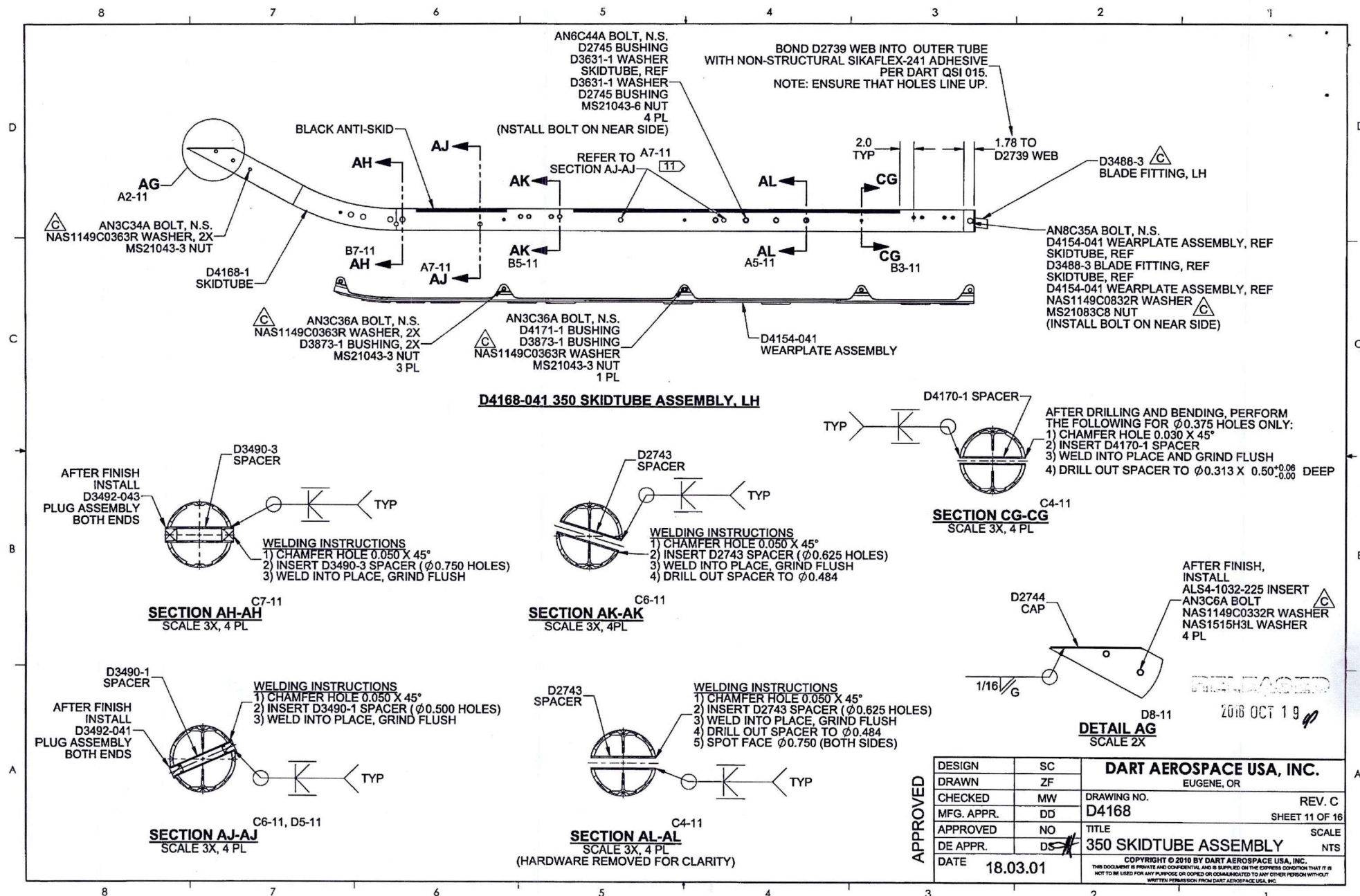


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



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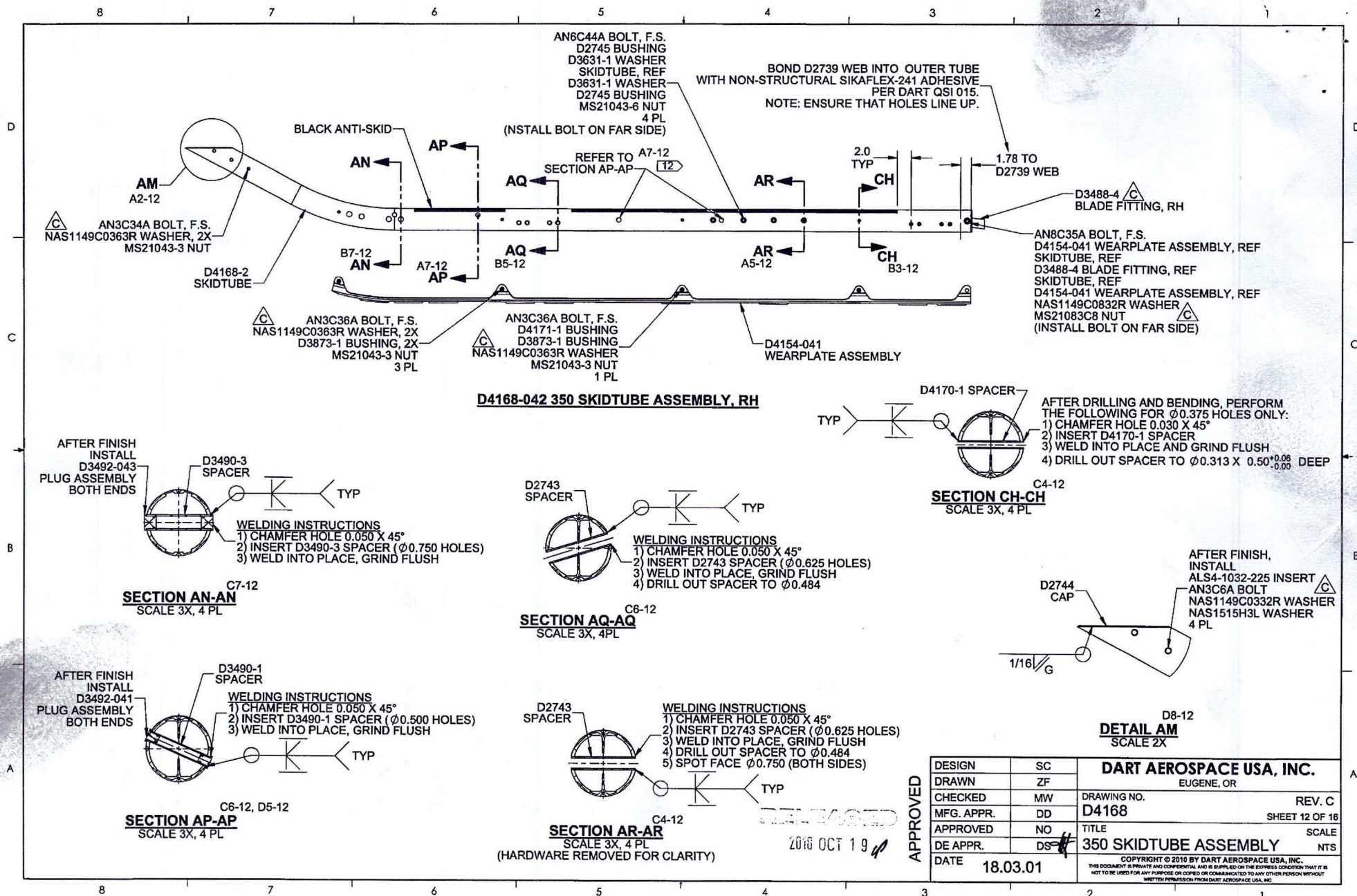


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details: _____					



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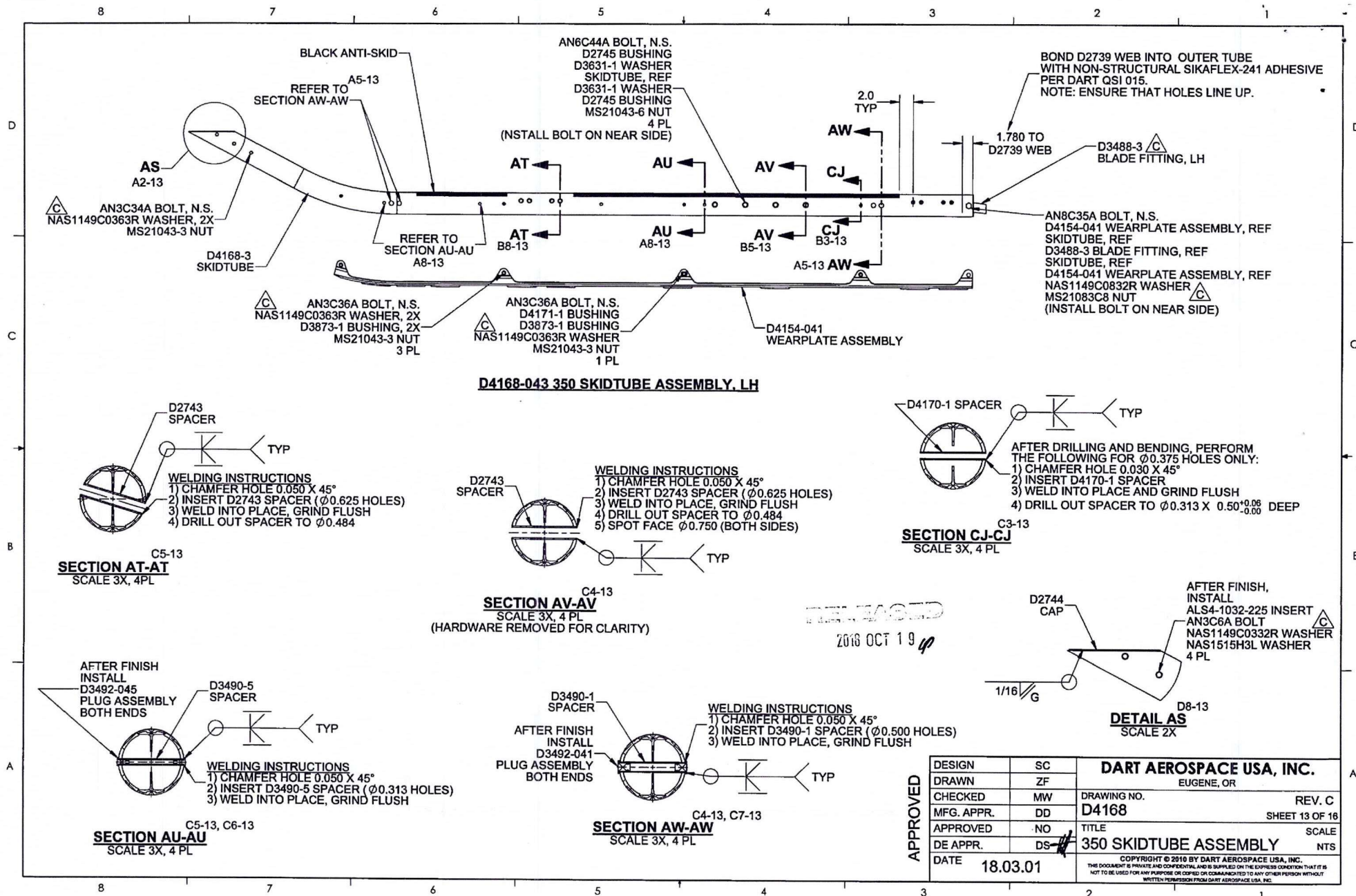


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



Entered: _____ Date: _____

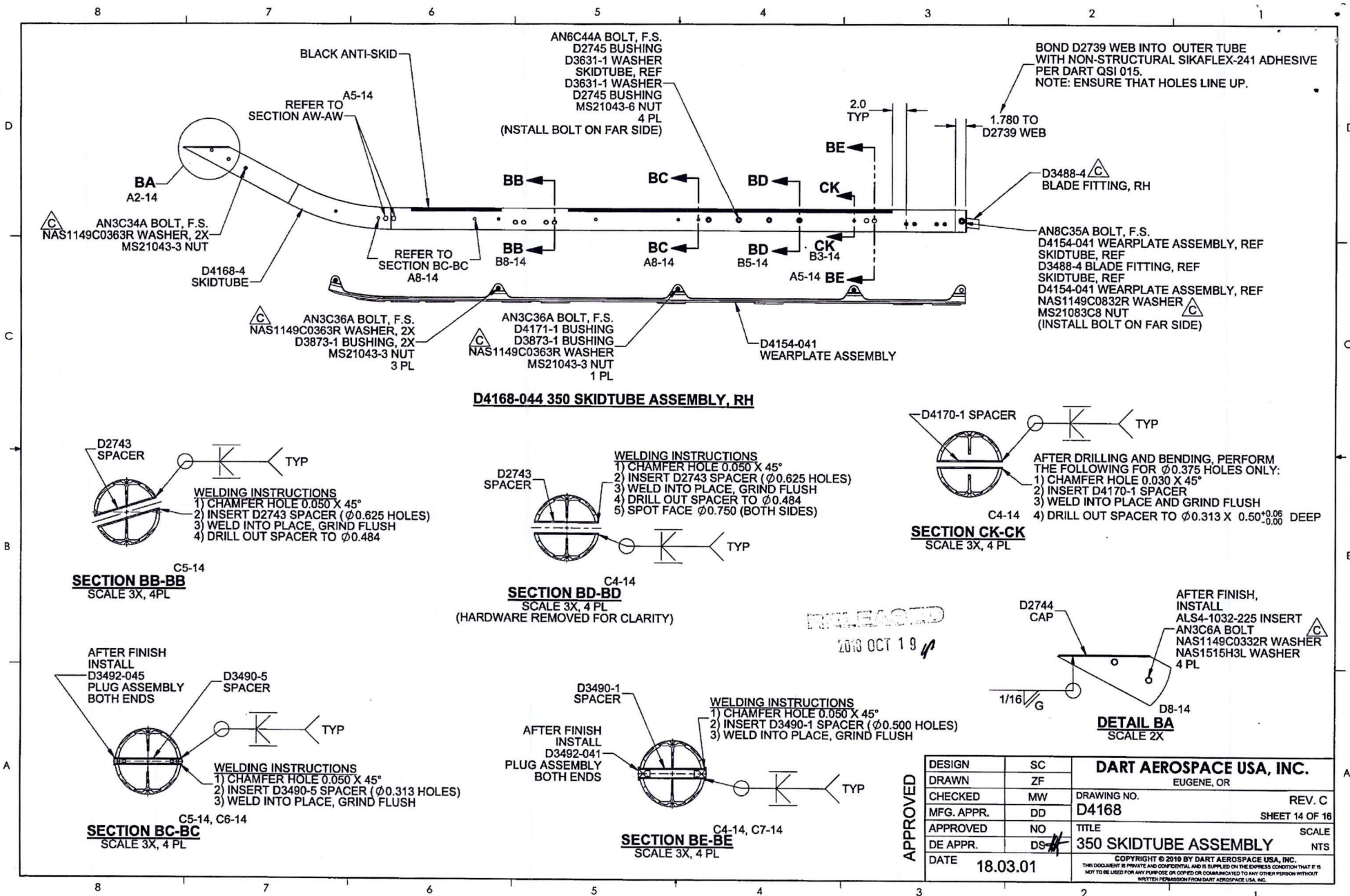


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



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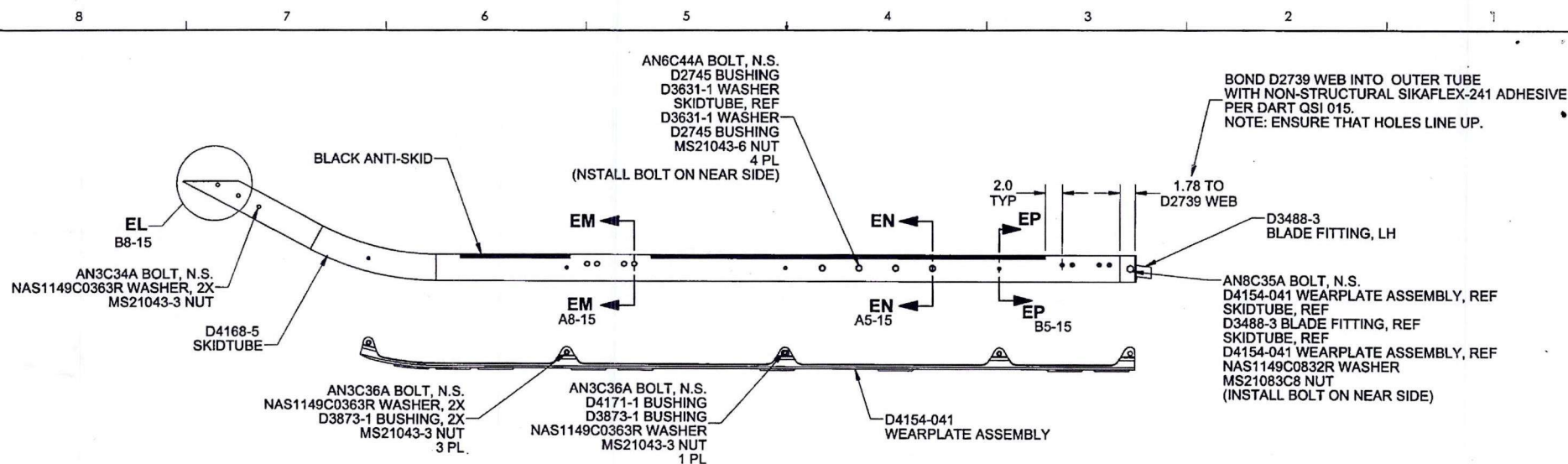


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

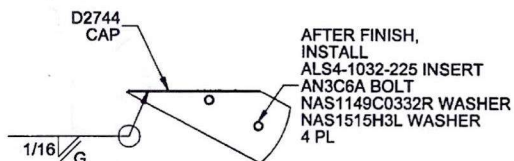
NCR No. _____

Route update only ☐

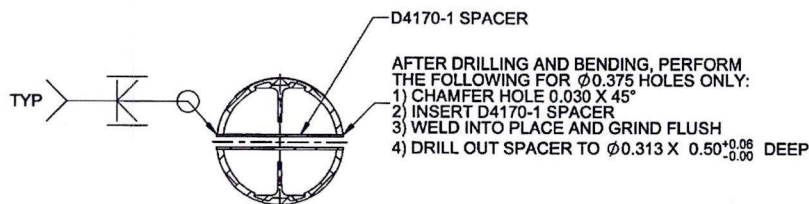
Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread		FAULT CATEGORY Other/Details:			



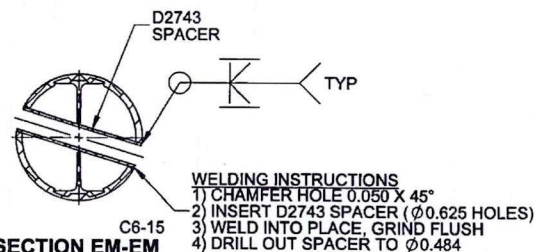
D4168-051 350 SKIDTUBE ASSEMBLY, LH



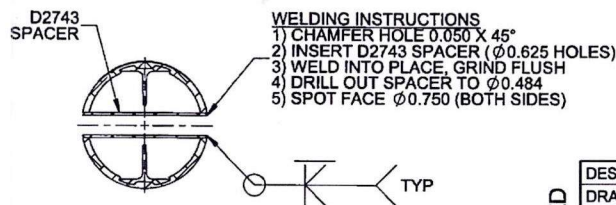
DETAIL EL
SCALE 2X



SECTION EP-EP
SCALE 4X, 4 PL



SECTION EM-EM
SCALE 4X, 4 PL



SECTION EN-EN
SCALE 4X, 4 PL
(HARDWARE REMOVED FOR CLARITY)

RELEASED
2010 OCT 19

DESIGN	SC	DART AEROSPACE USA, INC. EUGENE, OR	
DRAWN	ZF		
CHECKED	MW	DRAWING NO.	REV. C
MFG. APPR.	DD	D4168	SHEET 15 OF 16
APPROVED	NO	TITLE	SCALE
DE APPR.	DS	350 SKIDTUBE ASSEMBLY	NTS
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Entered: _____ Date: _____

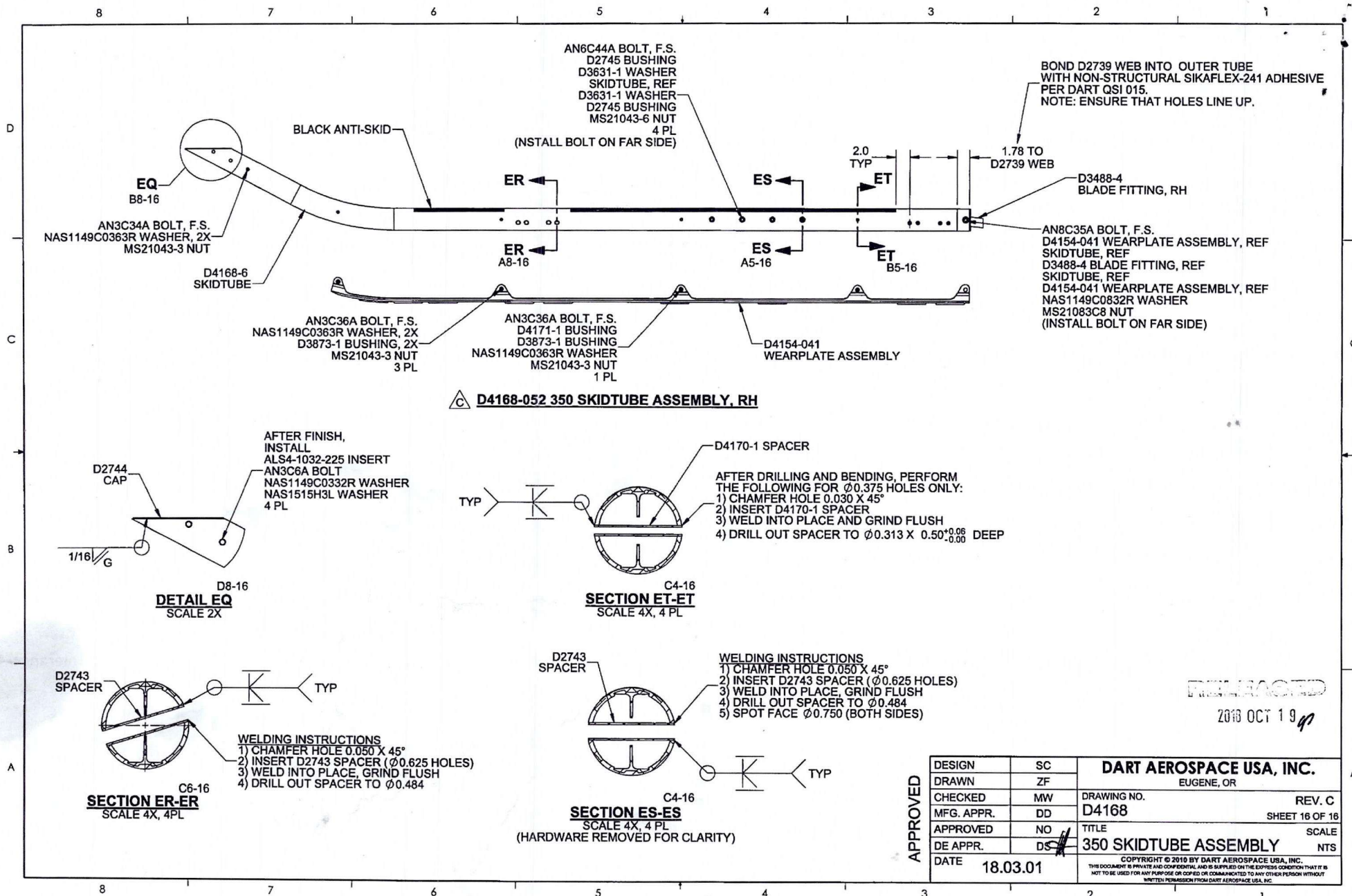


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

ENGINEERING CHANGE NOTICE **DART AEROSPACE LTD**

Date:	2018.10.17	Job No.:	RD18-636-01	ADR Yes/No:	Y	ADR Date:	18.05.28	ECN #:	18- 830
Product No.:	D350-636 SKIDTUBES			Created By:	NO	Approved By:	[Signature]		
Product Name:	AS350 SKIDTUBES			Checked By:	[Signature]				

Reason for Change:

Add standard and training skidtubes without float provisions, address several XXRs.

Documents Released:

MDL-D350-636 Rev V, IIN-D350-636 Rev 4, DSI 9662 Rev C, DSI 9802 Rev A
D2750 Rev H, D3535 Rev C, D3537 Rev F, D3488 Rev C, D3791 Rev B, D3793 Rev B, D4168 Rev C,

IF APPLICABLE: NCR: See Below PAR: See Below CAR: See Below CIR: _____ URF: 16-638

PAPERWORK UPDATE

☒

PARTS MUST COMPLY

☒

PREVIOUS PARTS SATISFACTORY

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#	Quality Assurance / Customer Support Actions	Reqd	Resp	Notes	Complete
1	Notify Previous Customers	N			
2	Notify Airbus	N			
3	Notify Leonardo	N			
4	Manufacturing Licensing Agreement Update	N			

#	Engineering Actions	Reqd	Resp	Notes	Complete
5	Required Documents/Drawings/Item ID's Under Review (URF)	Y	NO		17.10.19 N.O.
6	Update Master Document List (MDL)	Y	NO	MDL-D350-636 Rev. V	18.08.07 N.O.
7	Update Document Record (DR)	N			
8	Update Product Competability Matrix	Y	MB		
9	Notify TC / FAA of Change (eg. ICA, 8110-3)	Y	NO	8110-3 attached	
10					

#	Document Control Actions	Reqd	Resp	Notes	Complete
11	Move / Update Electronic Files / Design Journal	Y	MG		mg 18.10.22
12	Update Product Specification Files (Bluefiles)	Y	MG	DSI 9662 to on request only	mg 18.10.22
13	Update Approved/Preliminary Dwg PDF Files	Y	MG		mg 18.10.22
14	Update Product Development Summary (STC applications)	N			
15	Update QSI 021 (TC/FAA STC) and/or STC Approval List	N			
16	Create/Update Parts / STC Database	Y	MG		mg 18.10.22
17	Update / Verify Authorized Release Certificate Database	Y	MG		mg 18.10.22
18	Create / Update Change Record Form / Item Card Database	Y	MG	See Below	mg 18.10.22
19	Create / Update Packaging Process Plan (PPP)	Y	MG		mg 18.10.23
20	Red Decals required on Packaging Process Plan (PPP)?	Y	MG		mg 18.10.23
21	Update Controlled Supplier Documents (Qpulse) Database	N			
22	Update Grey Project Binder / Electronic Project Folder	Y	MG		mg 18.10.22
23	Update D-Part / M-Drawing / DSI / DEO Master Binders	Y	MG		mg 18.10.22
24	Update "Royalty Paid to" attribute (Parts sold under Dart USA STC's)	N			
25					

Description / Action:

Create D350-636-021/-022/-023/-024 At CHG 001. D350-636-011/-012/-013/-014 to CHG 008, D350-636-015/-016/-017/-018 to CHG 006, D350-636-049 at CHG 001
Create D350-636-311/-312/-313/-314/-315/-316/-317/-318 Skidtubes at CHG 001 for DSI 9662
Create D2750-5/-6/-051/-052, D3488-3/-4, D4168-5/-6/-051/-052, D3793-5
NCR18-3150/PAR17-581/PAR15-397/CAR18-247/CAR17-163

D350-636-015/-016/-017/-018 at CHG 005 in stock can be shipped as is.

D350-636-011/-012/-013/-014 at CHG 007 in stock are acceptable to ship as is. Orders for LH/RH pairs must be shipped with matching CHG NUMBERS (check wearplates)

Parts made from dwgs D3537 Rev.E, D3488 Rev.B, and D4168 Rev.B are acceptable to use as is

Scrap D3535-13/-25/-35 Rev. B wearshoes and D3793-1/-3 Rev A wearshoes.

D350-636-011/-012/-013/-014 at CHG 007 in WIP must be reworked using D3793-1/-3/-5 Rev B wearshoes per D2750 Rev H

ECN Verified & Complete: [Signature]

Date:

18/11/29

Change Record

PAGE 1 OF 1

Part Number: D350-636-015/-016

Description: SKIDTUBE STD LH/RH w/ TRAINING WEARPLATE

[illegible]